



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,937	01/19/2006	Bruno Egner-Walter	VAL 204 P2	8638
34232	7590	01/23/2008		
MATTHEW R. JENKINS, ESQ. 2310 FAR HILLS BUILDING DAYTON, OH 45419			EXAMINER FERGUSON, MICHAEL P	
			ART UNIT 3679	PAPER NUMBER
			MAIL DATE 01/23/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/537,937	<b>Applicant(s)</b> EGNER-WALTER ET AL.	
	<b>Examiner</b> MICHAEL P. FERGUSON	<b>Art Unit</b> 3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 October 2007 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to because of the following:

Elements **30,32**, shown in cross-sectional view in Figures 2, 4 and 5 of the replacement drawings filed October 11, 2007, lack proper cross-hatching based on the material of such elements. Accordingly, the replacement drawings have not been approved.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

2. Claims 14, 17 and 22 are objected to because of the following informalities:

Claim 14 (line 3) recites "said recess". It should recite --said first recess--.

Claim 17 (line 3) recites "said first ball cup". It should recite --said ball cup--.

Claim 22 (lines 1-4) recites "wherein said ball pin system comprises a second ball comprising a second ball pin having a second pin dimension". It should recite --wherein said second pin has a second pin dimension--.

For the purpose of examining the application, it is assumed that appropriate correction has been made.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 2, 4, 12 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 (line 3) recites the limitation "said second ball pin". There is insufficient antecedent basis for this limitation in the claim.

Claim 4 (line 2) recites "wherein said ball comprises a ball cup". It is unclear as to how the ball can be comprised of or made-up of a ball cup. Clearly the ball and the ball cup are two separately formed elements. Furthermore, it is unclear as to whether the ball cup recited in claim 4 constitutes a second ball cup within the claimed ball joint, or whether it is the same ball cup as the previously recited ball cup of claim 3. It

Art Unit: 3679

appears the applicants intended for claim 4 (line 2) to recite --wherein said ball engages said ball cup--.

Claim 12 (lines 1-2) recites the limitation "said second pin". There is insufficient antecedent basis for this limitation in the claim.

Claim 17 (line 3) recites the limitation "said second recess". There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 11, 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hayashi (US 5,284,397).

As to claim 11, Hayashi discloses a ball pin system comprising:

a first ball **23**; and

a first pin **22** integrally formed in the first ball;

the first ball comprising a first recess **24** situated generally opposite first pin, the first recess having a recess dimension and the first pin having a pin dimension, the pin dimension being at least as large as the recess dimension (pin dimension **22** is larger in diameter than recess dimension **24**; Figure 2).

As to claim 16, Hayashi discloses a ball pin system wherein the first ball **23** comprises a ball cup **13** molded thereto (Figure 2).

As to claim 17, Hayashi discloses a ball pin system wherein a ball cup **13** comprises a stop **21** that is received in the first recess **24** to facilitate limiting a rotation of a rod **12** coupled to the ball cup (Figure 2).

7. Claims 1, 3-6, 8, 10, 11, 14-19 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Hathaway (US 6,352,227).

As to claim 1, Hathaway discloses a ball pin comprising a ball **12** and a pin **30** connected to the ball, the ball comprising a recess **32** on its side facing away from the pin, the recess having a recess diameter that is substantially the same as a diameter of the pin of the ball pin (a diameter of pin **30** is substantially the same as recess diameter **32** so that the pin is received within the recess; Figure 1; column 4 lines 29-32).

As to claim 3, Hathaway discloses a ball joint comprising a ball pin wherein the ball pin comprises a ball cup **14** made of plastic which is disposed on a connecting part **10** (Figure 1).

Applicant is reminded that **process limitations are given little patentable weight in product claims** since the patentability determination of product-by-process claims is based on the product itself, even though such claims are limited and defined by the process. See MPEP § 2113. "The patentability of a product does not depend on its method of production." In re Thorpe, 777 F.2d 695,698,USPQ 964,966 (Fed.Cir.1985). Accordingly, the process limitations of forming the ball cup by injection molding is given little patentable weight within claim 3; all that is required of claim 3 is a ball cup disposed on a connecting part.

Art Unit: 3679

As to claim 4, Hathaway discloses a ball joint wherein the ball **12** engages the ball cup **14** (Figure 1).

As to claim 5, Hathaway discloses a ball joint wherein the ball joint comprises a seal **18** which acts upon the ball cup **14** (Figure 1).

As to claim 6, Hathaway discloses a ball joint wherein the ball cup **14** comprises a groove in which the seal **18** is arranged (Figure 1).

As to claim 8, Hathaway discloses a ball joint wherein the ball joint comprises a stop **30** which is situated in the recess **32** and defines a maximum possible movement of the ball cup **14** relative to the ball **12** (Figure 1).

As to claim 10, Hathaway discloses an assembly consisting of two ball joints wherein the pin **30** of the ball pin is fitted into a recess **32** of a ball **12** of another ball pin (Figure 1).

As to claim 11, Hathaway discloses a ball pin system comprising:

- a first ball **12**; and

- a first pin **30** integrally formed in the first ball;

- the first ball comprising a first recess **32** situated generally opposite first pin, the first recess having a recess dimension and the first in having a pin dimension, the pin dimension being at least as large as the recess dimension (a dimension of pin **30** is at least as large as recess dimension **32** so that the pin is received within the recess; Figure 1; column 4 lines 29-32).

Art Unit: 3679

As to claim 14, Hathaway discloses a ball pin system wherein the ball pin system comprises a second ball **12** having a second pin **30** integrally formed in the second ball and mounted into the first recess **32** (Figure 1).

As to claim 15, Hathaway discloses a ball pin system wherein the second ball **12** comprises a second recess **32** situated generally opposite the second pin **30**; the first and second balls **12** and the first and second recesses **32** being generally co-axial when the second ball is mounted onto the first ball (Figure 1).

As to claim 16, Hathaway discloses a ball pin system wherein the first ball **12** comprises a ball cup **14** molded thereto (Figure 1, column 3 lines 20-24).

As to claim 17, Hathaway discloses a ball pin system wherein a ball cup **14** comprises a stop **30** that is received in the second recess **32** to facilitate limiting a rotation of a rod **10** coupled to the ball cup (Figure 1).

As to claim 18, Hathaway discloses a ball pin system wherein the second ball **12** comprises a ball cup **14**, the ball cup comprising a stop **30** that is received in the second recess **32** to facilitate limiting a rotation of a rod **10** coupled to the ball cup (Figure 1, column 3 lines 20-24).

As to claim 19, Hathaway discloses a ball pin system wherein the first ball **12** comprises a first diameter and the second ball **12** comprises a second diameter, the first and second diameters being the same (Figure 1).

As to claim 22, Hathaway discloses a ball pin system wherein the second pin **30** has a second pin dimension, the second pin dimension being substantially the same as



Art Unit: 3679

the recess dimension so that the second pin may be press fit into the first recess **32**

(Figure 1).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 3-5, 7-9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi.

As to claim 1, Hayashi discloses a ball pin comprising a ball **23** and a pin **22** connected to the ball, the ball comprising a recess **24** on its side facing away from the pin (Figure 2).

Hayashi fails to disclose a ball pin wherein the recess has a recess diameter that is substantially the same as a diameter of the pin of the ball pin. Hayashi does not disclose any structural or functional significance as to the size of the diameter of the pin **22**, other than that the pin is received within a mating hole in arm **11** (Figure 2).

The applicant is reminded that a change in the size of a prior art device, wherein no structural or functional significance as to the specific size of an element is disclosed, is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the ball pin system disclosed by Hathaway wherein the diameter of the pin is substantially the same as recess diameter

Art Unit: 3679

as Hathaway does not disclose any structural or functional significance as to the specific size of diameter of the pin, other than that the pin is received within a mating hole in arm **11**, and as such practice is a design consideration within the skill of the art.

As to claim 3, Hayashi discloses a ball joint comprising a ball pin wherein the ball pin comprises a ball cup **13** made of plastic which is disposed in a connecting part **12** (Figure 2).

Applicant is reminded that **process limitations are given little patentable weight in product claims** since the patentability determination of product-by-process claims is based on the product itself, even though such claims are limited and defined by the process. See MPEP § 2113. "The patentability of a product does not depend on its method of production. " In re Thorpe, 777 F.2d 695,698,USPQ 964,966 (Fed.Cir.1985). Accordingly, the process limitations of forming the ball cup by injection molding is given little patentable weight within claim 3; all that is required of claim 3 is a ball cup disposed in a connecting part.

As to claim 4, Hayashi discloses a ball joint wherein the ball **23** engages the ball cup **13** (Figure 2).

As to claim 5, Hayashi discloses a ball joint wherein the ball joint comprises a seal **25** which acts upon the ball cup **13** (Figure 2).

As to claim 7, Hayashi discloses a ball joint wherein the seal **25** comprises an anchoring section **21** which is arranged in the recess **24** and a circular or annular sealing section which bears against the ball cup **13** (Figure 2).

As to claim 8, Hayashi discloses a ball joint wherein the ball joint comprises a stop **21** which is situated in the recess **24** and defines a maximum possible movement of the ball cup **13** relative to the ball **23** (Figure 2).

As to claim 9, Hayashi discloses a ball joint wherein the stop **21** is made in one piece with the ball cup **13** (Figure 2).

As to claim 13, Hayashi fails to disclose a ball pin system wherein the first recess comprises a depth that is approximately three quarters the length of the first ball. Hayashi does not disclose any structural or functional significance as to the specific size of the first recess **24**, other than that the depth of the first recess is adequately large enough to enable convex portion **21** to pivot within the recess (Figure 2).

The applicant is reminded that a change in the size of a prior art device, wherein no structural or functional significance as to the specific size of an element is disclosed, is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the ball pin system disclosed by Hayashi wherein the first recess comprises a depth that is approximately three quarters the length of the first ball as Hayashi does not disclose any structural or functional significance as to the specific size of the first recess, other than that the depth of the first recess is adequately large enough to enable convex portion **21** to pivot within the recess, and as such practice is a design consideration within the skill of the art.

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Sugiura (US 5,860,757).

Art Unit: 3679

As to claim 2, Hayashi fails to disclose a ball pin wherein the pin comprises knurling so that it is capable of being pressed into a recess of a second ball pin without any play.

Sugiura teaches a ball pin wherein a pin **11** comprises knurling **28** so that it is capable of being pressed into a recess of a ball **12** without any play; the knurling ensuring a secure connection between the pin and the ball, the knurling compensating for any play between the members (Figures 1-3, column 5 lines 24-47). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the ball pin disclosed by Hayashi wherein the pin is provided with knurling as taught by Sugiura in order to provide a more secure connection between the pin and the ball, the knurling compensating for any play between the members.

11. Claims 20 and 21 rejected under 35 U.S.C. 103(a) as being unpatentable over Hathaway.

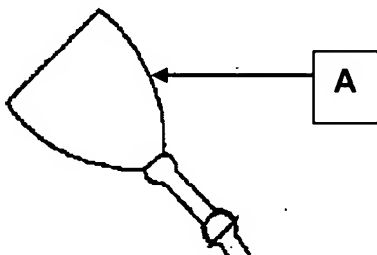
As to claim 20 and 21, Hathaway does not disclose any structural or functional significance as to the specific size of the first and second balls **12** (Figure 1). Hathaway fails to disclose a ball pin system wherein the first ball comprises a first diameter and the second ball comprises a second diameter, wherein the second diameter is smaller than the first diameter.

The applicant is reminded that a change in the size of a prior art device, wherein no structural or functional significance as to the specific size of an element is disclosed, is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955). Accordingly, it would have been obvious to one having ordinary skill

in the art at the time the invention was made to modify the ball pin system disclosed by Hathaway wherein the second ball diameter is smaller than the first ball diameter as Hathaway does not disclose any structural or functional significance as to the specific size of the first and second balls, and as such practice is a design consideration within the skill of the art.

12. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hathaway in view of Sugiura.

As to claim 2, Hathaway discloses a ball pin system wherein a second pin is fit into the first recess **32** (Inherently, a tubular connector element, housing the power cord attached to lamp head **A**, is fit into a first recess **32**. The tubular connector element constitutes a second pin; Figure 3B reprinted below with annotations). Hathaway fails to disclose a ball pin system wherein a second pin is knurled and press-fit into the first recess.



Sugiura teaches a ball pin system wherein a pin **11** is knurled **28** and press-fit into a recess in ball **12**; knurling **28** ensuring a secure connection between pin **11** and the recess, the knurling compensating for any play between the members (Figures 1-3, column 5 lines 24-47). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the ball pin system disclosed

Art Unit: 3679

by Hathaway wherein the second pin is provided with knurling as taught by Sugiura in order to provide a more secure connection between the second pin and the first recess, the knurling compensating for any play between the members.

### ***Response to Arguments***

13. Applicant's arguments filed October 11, 2007 have been fully considered but they are not persuasive.

As to claim 11, Attorney argues that:

Hayashi does not disclose a ball pin system wherein the first recess has a recess dimension and the first pin has a pin dimension, *the pin dimension being at least as large as the recess dimension*.

Examiner disagrees. As to claim 11, Hayashi discloses a ball pin system wherein the first recess **24** has a recess dimension and the first pin **22** has a pin dimension, the pin dimension being at least as large as the recess dimension (pin dimension **22** is larger in diameter than recess dimension **24**; Figure 2).

As to claims 1 and 11, Attorney argues that:

Hathaway does not disclose a ball pin *wherein the recess has a recess diameter that is substantially the same as a diameter of the pin of the ball pin*.

Examiner disagrees. As to claims 1 and 11, Hathaway discloses a ball pin wherein the recess **32** has a recess diameter that is substantially the same as a diameter of the pin **30** of the ball pin (a diameter of pin **30** is substantially the same as recess diameter **32** so that the pin is received within the recess; Figure 1; column 4 lines 29-32).

***Conclusion***

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Ferguson whose telephone number is (571)272-7081. The examiner can normally be reached on M-F (6:30am-3:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571)272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3679

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
MPF  
01/16/08



DANIEL P. STODOLA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600



NOT  
APPROVED.  
NTP  
1/16/08

REPLACEMENT DRAWING SHEETS  
IN RESPONSE TO OFFICE ACTION OF 07/12/2007  
Serial No. 10/537,937  
Filed January 19, 2006

1/5

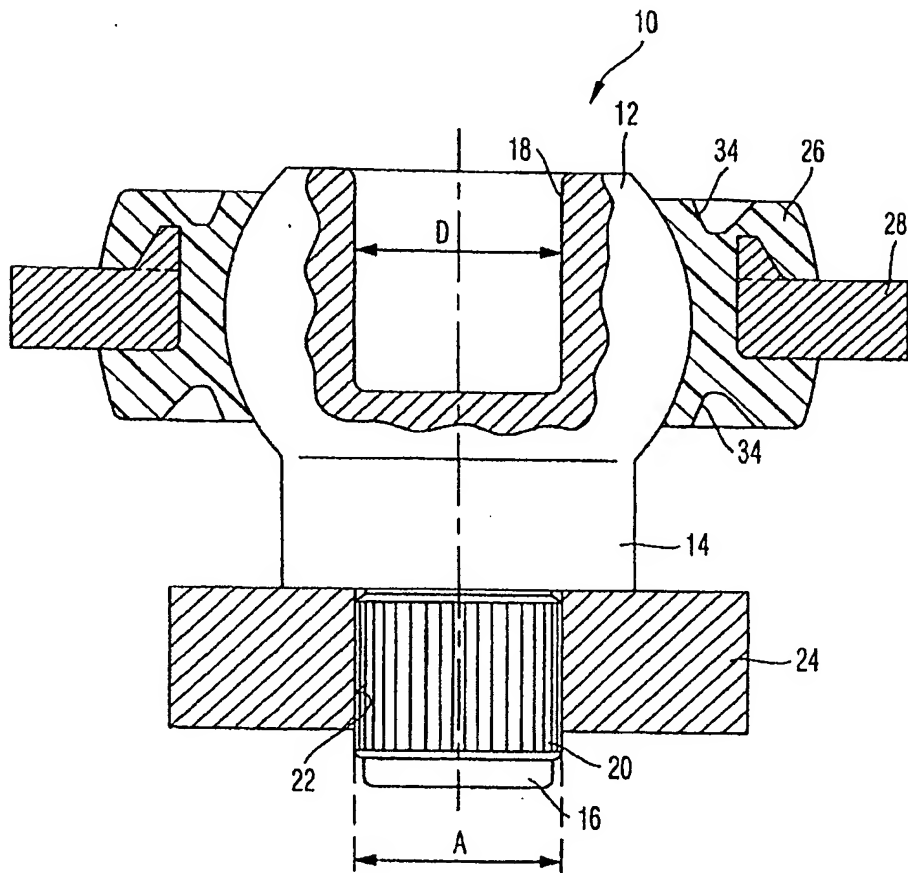


Fig. 1